

# Social and Cultural Implications of Food and Food Habits

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*It may require a considerable resourcefulness for the reader to project the points made here in influencing the behavior of a primitive people to the mores of the people among whom he works. The panel discussion, for which this paper laid the groundwork, did some of this projection for the listeners.*

✚ The last few decades have witnessed a rediscovery by the health professions that man cannot be understood out of context of his total environment. The concept that the social and cultural components of this environment are of equal if not of greater significance than the physical is not entirely new, but only recently have attempts been made to organize and formalize this knowledge. Recent articles have indicated that these social and cultural factors may play crucial roles in the whole broad area of interest to health workers, from the dynamics of disease processes in the individual<sup>1-3</sup> to the development of community-wide health promotion programs.<sup>4, 5</sup>

It is no coincidence that one of the major areas of interest common to both the health professions and the social sciences should center round the topic of food. From the dawn of medical history the role of food in health and disease has been under investigation by health workers, and its significance increases as further advances in nutritional knowledge are made. For social scientists a study of food ways and the system of attitudes, beliefs, and practices surrounding food may constitute

an important technic in unraveling the complexities of the over-all culture pattern of a community.<sup>6</sup> Health workers are, in addition, now learning that food habits are among the oldest and most deeply entrenched aspects of many cultures, and cannot therefore be easily changed, or if changed, can produce a further series of unexpected and often unwelcome reactions.

With this degree of interest in food common to social scientists and health workers it is perhaps surprising that so little effective application of social science concepts has been made to nutrition programs. Two major reasons may account for this. The first is the lack of effective communication between the two sciences; the second the degree to which we as health workers are "culture bound" and tend to reject concepts and patterns of behavior different from our own.

Lack of effective communication relates not only to the difficulties resulting from specialized terminology, although there is little doubt that this is a problem. Of greater moment is the fact that health workers and social scientists approach their common goal, in this case a study of food, from two entirely different frames of reference without any common meeting ground. Social scientists, usually untrained in the field of health, cannot be expected to interpret the possible relationship of many of their findings to health programs, nor is this necessarily of particular interest to the majority of them. Health workers not being aware of the areas of competence of the social sci-

ences cannot specify the contributions they might expect from these disciplines, especially in initiating or evaluating programs.

This paper is an attempt to illustrate by means of a case study some of these social and cultural factors of significance in programs designed to change food habits; an attempt will be made to derive certain general principles from this illustration; and finally some of the specific contributions that social scientists could make in such programs will be indicated.

Before considering these factors, however, it is desirable to elaborate somewhat on the degree to which we as health workers are "culture bound." The type of training the majority of us receive makes it difficult for us to see any merit in points of view or patterns of behavior different from our own. Food patterns for example which differ from our concepts of "good" practices are automatically labeled "bad." Attitudes and beliefs differing from ours are regarded as "illogical," "misinformed" or "wrong." The people who hold these different concepts are regarded as "ignorant" or perhaps "superstitious," "childlike" or plain "stupid."

Unfortunately there are still too many of us who are convinced that our own particular set of beliefs, attitudes, and practices is the only correct way of life and one that should be emulated by people of all cultures and all social classes. Such a philosophy on our part presumes that only we as professional health workers know what is good for all people. Furthermore it is frequently our fond belief that our nutritional education is being executed in a "knowledge vacuum" (to use the words of Edward Wellin<sup>7</sup>) as far as the recipients are concerned; that because the population we are serving knows nothing of our nutritional concepts, they therefore have no concepts whatever about nutrition. It is evident that documentation of the

relevance of social and cultural factors to health programs is unlikely to lead to any effective application of these concepts as long as such attitudes are maintained by the majority of health workers.

### The Case Study \*

In 1940 the Pholela Health Centre was established on a "native reserve" in the Union of South Africa. Health conditions among the Zulu tribesmen to be served by this center were extremely poor. The crude mortality rate was 38 per 1,000 population and the infant mortality rate 276 per 1,000 live births. Poor environmental sanitation and communicable diseases represented two major health problems, but of greater significance, perhaps, was the extensive malnutrition that existed. Eighty per cent of the people exhibited marked stigmata of this malnutrition and evidence of gross nutritional failure in the form of pellagra or kwashiorkor was common.

The Pholela Health Centre, charged with the responsibility of providing comprehensive medical care and health services to the population, was organized on the basis of a number of multidisciplinary teams. Each team, consisting of a family physician, a family nurse, and a community health educator

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(health assistant), was responsible for the health of a number of families living in a defined geographical area. The major health problems of the area were defined by the teams and broadly classified into "unfelt" and "felt" needs. Health programs to meet these needs were then initiated on two planes in which the promotive-preventive and curative aspects of the services could be integrated. Basically the function of the health assistants was to develop community health education programs whereby the "unfelt" needs could be made apparent to the community, and members of the community stimulated to change aspects of their way of life to meet these needs. Simultaneously curative and preventive services to individuals within their family units was the responsibility of the doctor and nurse on the team. Each individual was offered complete periodic health examinations, followed by a family conference to discuss the health problems of that family, and any illness in any family member would similarly be treated by his family doctor and nurse. At the clinical sessions the community health education programs were reinforced in the specific advice given the individual patients.\*

The case study to be presented here is a description of one program which was designed to change the food habits of mothers and infants. Dietary surveys revealed that the existing diet consisted principally of a single staple, corn, prepared in numerous ways, supplemented by dried beans, negligible amounts of

milk and occasionally meat and wild greens. Potatoes and pumpkins were eaten seasonally, and millet (sorghum) was fermented to brew beer which was consumed in large quantities. Whenever funds allowed, sugar and white bread were also bought. Even though this was a rural agricultural community, poor farming methods and poverty of the soil made it impossible for the vast majority of the people to raise adequate food supplies. Consequently a large percentage of the food consisted of refined corn meal purchased with money sent home by the migrant laborers. Furthermore, during the best month of the year, if all the milk had been equally distributed, only one-twentieth pint per head per day would have been available. Having determined the existing food patterns an analysis was then made of the major factors responsible for the inadequacy of the diet. These included the extreme poverty of the people, the extensive soil erosion, certain traditions as to which foods were customary, and inefficient use of available resources. In addition prevailing cooking methods frequently destroyed a large fraction of what nutrients were present.

As anticipated, early attempts at group meetings and home visits to demonstrate the causal relationship between a poor diet and a low standard of health encountered considerable skepticism. People maintained that their diet had always been the diet of their people. On this same diet, they maintained, their ancestors had been virile and healthy and consequently there could be no possible relationship between the present diet and ill health.

It was difficult to refute this point without having any reliable information about the health of their ancestors.

A search of the available literature, however, revealed that the present diet had not always been the traditional diet of the Zulus and other Bantu-speaking tribes. Prior to the arrival of the whites,

\* For a more detailed description of the technics and programs of the South African health centers see:

Kark, Sidney L., and Cassel, John. *The Pholela Health Centre—A Progress Report.* South African M. J. 26:101-104 (Feb. 9); 132-136 (Feb. 16), 1952.

Kark, Sidney L. "Health Centre Service—A South African Experiment in Family Health and Medical Care." *Social Medicine*, Chap. 26. E. H. Cluver, ed. Central News Agency, Johannesburg, South Africa, 1951.

the indigenous cereal had been millet, corn having been brought into the country by the early white settlers. Because of its greater yield, corn had gradually supplanted millet as the staple cereal, millet being reserved solely for brewing. Furthermore, historically the Zulus were a roving pastoral people owning large herds of cattle; milk and meat had played a prominent part in their diet. So important was milk as an article of food that no meal was considered complete unless milk was included. The relatively fertile nature of the land at that time and the extensive wild game resulted in further additions of meat to the diet and a plentiful supply of wild greens. Roots and berries gathered from the forests were also extensively used.

These facts were presented to the community at the regular small group meetings initiated by the health assistants and discussion invited. In particular, confirmation was sought from the older members of the tribe, and in most instances such confirmation was received. This endorsement by the prestigious and usually most conservative segment of the population insured that interest in the topic of food would remain high. Realization that the modern diet was not as traditional as had been supposed assisted in reducing resistance to the changes that were later advocated.

At subsequent meetings concepts of digestion and the functions of different foodstuffs were discussed. It was widely, though not universally, held that in some manner food entered the blood stream, but what happened to it thereafter was unspecified. Greatest interest was aroused by considering how a fetus was nourished in utero; discussion on this point would sometimes continue for hours. Many women were of the opinion that there must be a breast in the uterus from which the fetus suckled, but others indicated that calves in utero must be receiving nourishment in the same way,

and no one had ever seen a breast in a cow's uterus. Some women maintained that the fetus was nourished by the placenta as the Zulu term for placenta literally means "the nurse." But when challenged, they were unable to explain how the placenta could feed the baby.

The result of these and similar discussions was to arouse a desire for further knowledge. When the functions of the placenta and umbilical cord were explained by use of posters and models, the interpretation was readily accepted. Over a period of time the concept that body tissues were nourished by the food via the blood stream became generally agreed upon.

As the concepts about the digestion and absorption of food began to change, it was possible to direct discussion to the function of different types of food. The view generally held was that all food had only one function, to fill the stomach and relieve hunger. This view was challenged, however, by a number of people who maintained that certain foods gave strength and others were fattening—fat being a bodily attribute much valued in this community.

Gradually it became more generally accepted that different foods had different functions, particularly in regard to infant health and nutrition. In attempts to improve infant nutrition, and in view of the existing resources, it appeared that green vegetables, eggs, and milk were the foods on which greatest emphasis should be laid.

### Introduction of Green Vegetables

Even though green vegetables had rarely formed part of the diet, and then only in a few families, their introduction for a number of reasons appeared to be a promising first step. Wild greens gathered from the forests had always been eaten and were enjoyed, but due to soil erosion these were becoming increasingly difficult to find. There were

no very strong feelings or set of beliefs about green vegetables. The climate was suitable for their cultivation and each home had adequate space for use as a garden. Thus no marked objections to green vegetables was anticipated, their similarity to wild greens could be usefully exploited, and resources, at present unused, could be brought into use to make the vegetables available. In view of these circumstances the procedures that appeared to be necessary consisted of attempts to:

1. Increase the motivation of the people to eat vegetables—These included emphasis on their nutritional value in terms of concepts previously discussed; relating their taste to that of familiar wild greens; and emphasis on the financial savings that could be made by replacing part of the purchased food by home-grown vegetables. These views were presented at the group discussions held in the homes of the people and reinforced at the clinical sessions, particularly the prenatal and mother and baby sessions.

2. Demonstrate the means by which these vegetables could be obtained by the families—A demonstration vegetable garden was developed at the Health Centre where members of the staff could themselves gain practical gardening experience and where the families could have the methods of growing vegetables demonstrated. Vegetables from this garden were made available to certain families on prescription. The more cooperative families were assisted in starting their own gardens and as the number increased a seed-buying cooperative was initiated. Over the years a small market was established where families could sell their surplus produce, and annual garden competitions and an annual agricultural show were organized. As members of the Health Centre staff, particularly the health assistants, became more proficient gardeners themselves they were able to give practical advice and assistance to any of their families who desired it.

3. Demonstrate the palatability of the vegetables and the best means of incorporating them into the diet without destroying their nutrient values—Cooking demonstrations were organized both at the discussion groups and for the waiting patients at the Health Centre sessions. As far as possible, traditional means of preparing food were adhered to. Over the years different recipes were introduced and women from the area who were successfully

incorporating vegetables into their families' diets were encouraged to organize these demonstrations.

The response of the community to these programs was satisfactory. In 1941 the first garden survey revealed that only 3 per cent of the homes had any form of vegetable garden, and that a total of five varieties of vegetables were growing. By 1951, 80 per cent of the homes had gardens and were growing more than 25 varieties of vegetables. This response was all the more gratifying as the size of the area served had been increased sixfold over the course of the 10-year period, so that some families had had only relatively recent contact with the program.

#### Increasing Egg Consumption

The attempts to increase the consumption of eggs encountered somewhat greater resistance than did the vegetable program. Surveys revealed that over 95 per cent of the families had poultry, and that eggs were relatively plentiful at certain seasons of the year. Eggs were infrequently eaten, however, but in contrast to vegetables, very definite views were held about them. It was considered uneconomical to eat an egg that would later hatch and become a chicken; egg eating was regarded as a sign of greed; and finally eggs were thought by some people to make girls licentious.

After prolonged staff meetings the consensus of team opinion was that none of these beliefs had any deep emotional associations and that probably the concept of it being poor economy to eat eggs was the most important of the factors preventing further use being made of eggs. The program based on this analysis therefore was patterned on the same general lines as the vegetable program. Technics for improving the egg yield whereby eggs could both be eaten and leave sufficient for breeding were

discussed; the nutritional value and palatability of eggs were stressed both in the community education programs and for each specific patient at the prenatal and mother and baby sessions; and various methods for incorporating eggs into the diet without any marked modification of prevailing recipes were demonstrated. The fact that certain adverse views were held about eggs was of importance, however. Even though these views were not strongly held they indicated that relatively greater effort would be required to motivate the community to use eggs.

As might have been anticipated, therefore, response to this program was slower than to the vegetable garden program. In the course of 12 years however the technics proved relatively successful, and the consumption of eggs, particularly in infant diets, steadily increased. Furthermore, toward the later years of the program, families began to put excess eggs on the local market and found purchasers among their neighbors, a phenomenon totally foreign to this community.

### The Milk Program

Increasing milk consumption proved to be a considerably more difficult and complex problem. Not only was the supply extremely limited, but frequently the available milk was not being consumed. In particular, women took no milk whatsoever, and this became a matter of some concern to the Health Centre in regard to expectant and lactating mothers. Investigation disclosed that milk drinking was associated with very deep-seated beliefs and customs. Only members of the kin group of the head of a household could use milk produced by that man's cattle. This restriction applied equally to men, women, and children, so that no family could supplement its milk supply from another family outside the kin group, but the situa-

tion was more complex in the case of women.

During her menses or when pregnant, a woman was thought to exert an evil influence on cattle and was not allowed to pass near the cattle enclosure or partake of any milk. This applied even in her own home. Since it was usually impossible for men to know when a woman was menstruating, it was customary to exclude milk from the diet of the majority of girls once they had passed puberty. When a woman married and went to live with her husband's family group she fell under a double restriction. Not only was she a woman, but she was now in the home of a different kin group. Consequently, of all people in the community, married women were most rigidly excluded from partaking of milk. Under two conditions only might she have milk. If her father presented her with her own cow at the time of her marriage she could use milk from that cow, or if her husband performed a special ceremony involving the slaying of a goat, she would be free to use any milk in his home. Because of the general poverty of the area neither of these two procedures was common although several decades ago they were not uncommon in certain families.

The reasons for these customs were lost in the mists of antiquity, not even the oldest people in this community being able to explain them. "This is our custom, and this is how it has always been" was the only explanation offered. In all probability the customs are closely related to native religious beliefs centered around ancestors. Even today when some 60 per cent of the community are Christians, ancestors play a very important part, protecting a person from all manner of misfortune and ill health. The link between a man and his ancestors is his cattle, and ceremonies of propitiation involve the slaying of cattle. Accordingly, anything

that might have an evil influence on the cattle would endanger the relationship between a man and his ancestors. In addition, a married woman continues to have her own set of ancestors derived from her family and may not interfere in any way with her husband's.

The degree to which concepts concerning milk were enmeshed in the over-all cultural pattern made it obvious that the general approach used for increasing vegetable and egg consumption would be of little avail. Considerable motivation for drinking milk already existed in the community, and attempts to increase this motivation would be unlikely to change existing practices. Attempts were nevertheless made on several occasions to change these practices by stressing the importance of milk as an ideal food for lactating and expectant mothers, but were futile.

Analysis of the underlying beliefs indicated clearly that the barrier to greater milk consumption lay in the link between milk and the specific cattle from which it came. If milk from cows which did not belong to any member of the tribe or any other related groups could be introduced into the community, presumably the barrier would be overcome. The most practical method of accomplishing this was to make powdered milk available. Accordingly, supplies of powdered milk were obtained by the Health Centre and offered to families on prescription. No secret was made of the fact that this powder was a form of milk, but it was stressed that this milk did not originate from cows belonging to any of the Bantu people.

From the inception of this program it was clear that no stigma was attached to the use of the powdered milk. Even the most orthodox of mothers-in-law or husbands had no objection to this powder being used by the young women of their families. The only barrier that remained was that it was an unfamiliar food stuff with a strange taste. To over-

come this, the familiar formula—increase the motivation, help make the product easily available and demonstrate methods for incorporation into the diet—proved all that was necessary. The application of these technics produced a demand for the powdered milk that, over the years, steadily outgrew the Health Centre supply. Families were then encouraged to budget their slender incomes to allow for its purchase from the local stores. By 1954 it became apparent that in some families the demand for milk had become too great to be met from either of these two sources. To the gratification of the Health Centre staff permission was given in a number of the more educated families for women to consume milk from the family cows without any marked reaction from the rest of the community.

Some of the results of the Health Centre's programs are of interest. In the course of 12 years the infant mortality rate dropped from 276 to 96, pellagra and kwashiorkor all but disappeared from this area and the average weight of the babies at one year had increased by two pounds. This trend, as far as was known, was not occurring elsewhere in the country, and in fact in neighboring areas where the Health Centre provided only medical care but no community health education program, no such changes were discernible.

### Some General Principles

From this illustration it is now possible to derive some guiding principles indicating the significance of social and cultural factors to health programs in general.

The first is self-evident. Health workers should have an intimate detailed knowledge of the people's beliefs, attitudes, knowledge and behavior before attempting to introduce any innovation into an area. While this principle is frequently violated in practice it is

certainly no new concept in public health. What is not so well recognized however is that the intimate knowledge of these factors is but the initial step in the evaluation of cultural factors.

The second principle, which is usually more difficult to apply, is that the psychologic and social functions of these practices, beliefs, and attitudes need to be evaluated. As stated by Benjamin Paul,<sup>4</sup> "It is relatively easy to perceive that others have different customs and beliefs, especially if they are 'odd' or 'curious'. It is generally more difficult to perceive the pattern or system into which these customs or beliefs fit." It is in this area of determining the pattern or system into which these customs or beliefs fit that social scientists can probably make their greatest contribution to health programs. This is the knowledge that will help determine why certain practices obtain, help predict how difficult it will be to change them, and give indications of the technics that can be expected to be most helpful.

A third principle that should be emphasized was unfortunately not well illustrated in the example but is of fundamental importance in the United States. It should be appreciated that while it is permissible for some purposes to consider an over-all "American Culture," numerous distinct subcultures exist, sometimes even within a single county. These subcultural groups must be carefully defined, as programs based on premises, true for one group, will not necessarily be successful in a neighboring group. This also is an area in which we as health workers can receive invaluable assistance from social scientists.

There are a number of very interesting illustrations of the importance of these subcultural groupings in regard to food habits in the United States, of which only two will be mentioned. Margaret Cussler and Mary de Give<sup>8</sup> differentiate five major subcultural

groupings in the South: white owners, white sharecroppers, Negro owners, Negro sharecroppers and wage laborers. To a greater or lesser degree each of these groups had different attitudes, beliefs, knowledge, and practices in regard to food, and for different reasons. John Bennet, Harvey Smith, and Herbert Passin<sup>9</sup> have distinguished in the southern part of Illinois eight separate and distinct subcultural groups, each with its own set of attitudes toward food. Interestingly enough, none of these attitudes were based on a knowledge or interest in the nutritional value of the foods.

Many nutrition programs today are designed for application to the total area under the jurisdiction of the nutritionist—an area that is often very large. The underlying premise would be that this total area—region, state, district, or even county—has a completely homogeneous culture. Greater concentration of a nutritionist's time in a carefully defined subcultural group with the development of programs specifically designed for that group would eventually be more efficient in effecting permanent changes in food habits.

There are a number of other social and cultural factors, some of which have been implied in the case study and which, though important, have not been emphasized. These include a determination of the leadership patterns within a community, a definition of the decision makers in a family or larger institution, and determination of the status of various groups within the community and the status of the health worker in comparison to these groups. The importance of these factors has been well recognized by health workers in planning and executing programs and requires little further emphasis here. In this connection it is of interest to note however that several investigators<sup>8, 10</sup> report that in the majority of American homes all major food decisions are made by the

housewife. Concentration of the nutritional education on the housewife alone therefore would probably be more beneficial than attempts to educate the total community in many subcultures in the United States.

A further area in which profitable collaboration between social science and health could occur is concerned with the prediction of the long-range effects of any program. Following a program two interrelated series of questions would be of interest to all health workers. Are there likely to be any unanticipated repercussions of the program and, secondly, how permanent can the changes introduced be expected to be?

The answers to these questions will be largely determined by the degree to which the innovations are absorbed into the cultural framework and the impact they have on other facets of the culture. For example, in our illustration the effect of the acceptance of new dietary patterns by the Zulu women might conceivably eventually threaten the status of males as decision makers in that society. Similarly permission given to women to take milk might eventually be one of the factors changing the intensity of religious beliefs.

By indicating the possible effects on other segments of the culture, and by determining the degree to which the concepts embodied by the new program have been absorbed into the existing cultural framework, social scientists would have a significant contribution to make in sensitizing health workers to the possible long-range effects of their programs.

The concluding consideration is the

degree to which we as health workers are "culture bound." Unless we can avoid cultural bias or ethnocentricity in our dealings with people, much of the crucial data will not even be made available to us by members of the community. Even should we be fortunate enough to have access to some of these facts, our analysis of the situation will continually be distorted through imposition of our own culturally determined system of values onto the behavior of others. In this regard social scientists can perhaps help us to become somewhat less "culture bound," but fundamentally for many of us this requires a major reorientation of our own philosophy which only we ourselves can achieve.

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